Assembly Instructions

English

Grundig SAT Systems

PROFESSIONAL

Head-End HDTV Converter to IP
DVB-C/T → SPTS

PCIS 1000

KLASSE A CLASS

CE

GSS
Grundig SAT Systems GmbH
Beuthener Strasse 43
D-90471 Nuremberg

Phone: +49 (0) 911 / 703 8877
Fax: +49 (0) 911 / 703 9210
E-mail: info@gss.de
Internet: http://www.gss.de/en

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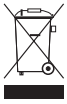
1 Safety regulations and notes

- Assembly, installation and servicing should be carried out by authorised electricians.
- Switch off the operating voltage of the system before beginning with assembly or service work or pull out the mains plug.
- Do not perform installation and service work during thunderstorms.
- Install the system so it will not be able to vibrate…
  - in a dust-free, dry environment
  - in such a manner that it is protected from moisture, fumes, splashing water and dampness
  - somewhere protected from direct sunlight
  - not within the immediate vicinity of heat sources
  - in an ambient temperature of 0 °C to +50 °C. In case of the formation of condensation wait until the system is completely dried.
- Ensure that the head-end station is adequately ventilated. Do not cover the ventilation slots.
- Beware of short circuits
- No liability is accepted for any damage caused by faulty connections or inappropriate handling.
- Observe the relevant standards, regulations and guidelines on the installation and operation of antenna systems.
- The standards EN/DIN EN 50083 resp. IEC/EN/DIN EN 60728 must be observed.
- **For further information please read the assembly instructions for the head-end station used.**
- **Test the software versions of the head-end station and the cassette and update them if necessary. The current software versions can be found at "www.gss.de/en".**

Take action to prevent static discharge when working on the device!



Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

2 General information

2.1 Packing contents

1 Cassette PCIS 1000
2 HF cables
1 Brief assembly instructions
1 Measuring log

2.2 Meaning of the symbols used

⚠ Important note

—> General note

• Performing works

2.3 Technical data

The devices meet the following EU directives:
2006/95/EC, 2004/108/EC
The product fulfils the guidelines and standards for CE labelling (page 33).

Unless otherwise noted all values are specified as "typical".

RF input DVB-T/-C

Channels ..... C5…C12, S21…S41, C21…C69
Frequency range: ..... 42 … 866 MHz
Input level: ..... 60 dBµV … 80 dBµV
Symbol rate ..... acc. to EN 300744/300429

LAN interface

Standard: 100-BASE-T
Data rate: ..... ≤ 80 MBit
Protocols: ..... UDP (User Data Protocol), RTP (Real-Time Transport Protocol)

ASI interfaces

Standard: ..... DIN EN 50083-9
Format: ..... MPEG ISO IEC 13818-1
User data rate: ..... 2 … 90 Mbit/s
Impedance: ..... 75 Ω
Level (input / output): ..... 800 mV_{PP} ± 10%
Return loss (input): ..... > 17 dB (5 … 270 MHz)

Connections

RF inputs: ..... 2 F sockets
RF output: ..... 1 IEC socket (no function)
LAN: ..... 1 RJ 45 socket
ASI input: ..... 1 BNC socket, 75 Ω
ASI output: ..... 1 BNC socket, 75 Ω
Connection strip (10-pin): ..... for supply voltages and control circuits
RS 232 socket: ..... serial interface for software update
Conditional access: ..... several channels can be descrambled.

Remote maintenance

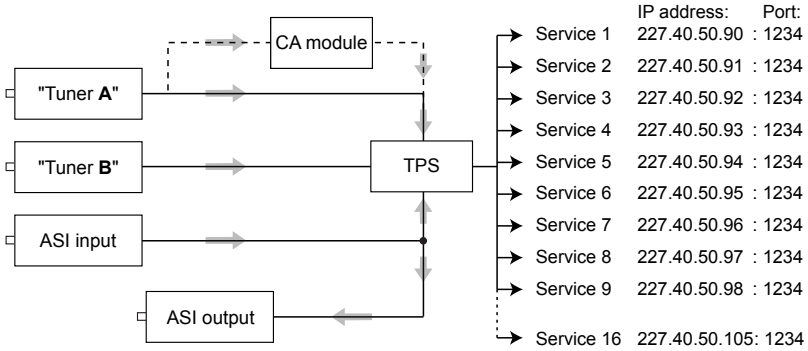
Remotely controllable (via PSW 1000*): ..... yes
Remote update (via BEflash*): ..... yes

(* and a corresponding management unit)

2.4 Description

The cassette is a DVB-C/T / SPTS converter which combines modulated services (programmes) in accordance with the DVB-C/T standard and data streams supplied via the ASI interface into one data stream in the TPS module. This is emitted via the LAN interface and can contain up to 16 services. For operating the cassette in a LAN network it can be assigned its own IP address. The cassette is equipped with two tuners. The accompanying channel strips consist of the digital DVB-C/T tuners and the digital signal processing levels. The resulting data streams from the "**Tuner A**"/"**Tuner B**" channel strips and from the data streams supplied via the ASI socket (ASI – Asynchronous Serial Interface according to DIN EN 50083-9) can take up to 16 services and are each assigned an IP address. The signal supplied into the ASI input is provided again via the ASI output.

Principle signal path:



In the head-end station display, the channel strips of the cassette are indicated with "**Bx ...A**" ("**Tuner A**") or "**Bx ...B**" ("**Tuner B**"). The channel strip "**Tuner A**" can descramble scrambled channels via a corresponding CA module. The cassette is controlled with the head-end station control unit.
Two LEDs provide an indication of the signal quality with their colour.

—> The status LEDs indicate the quality of the received transport streams:

LED indicator	Indication
Blinking green	Boot process
Green	Signal quality is good
Yellow	Signal quality is insufficient
Red	No signal
Off	The channel strip (modulator) is switched off

In an additional menu, the transmission of DVB service information (EIT, TDT and SDT) or teletext (TXT) can be individually activated or deactivated.

EIT (Event Information Table):
For each service, event information is transmitted (such as starting time, duration, scrambling etc.)

TDT (Time Date Table):
The transmitted table contains the current time and date.

SDT (Service Description Table):
Information relating to the scrambling is also sent with the name of each service.

The LEDs for the LAN interface show whether a network connection exists and whether a data transfer is in progress.
When the head-end station is switched on, the two-line LC display shows the software version of the control unit.
To operate this cassette the software version of the control unit must be "**V 44**" or higher. You can find the current operating software for the control unit and the cassette, the software "**BE-Flash**" and the current assembly instructions on the website "***www.gss.de/en***".

The cassette is intended for use in the PROFI-LINE head-end stations.

2.5 Software query

Control unit

If necessary, you can activate the indication of the software version of the control unit manually:

- Press any two keys on the control unit of the head-end station simultaneously until the display goes dark and the software version, e.g. "**V 44**" appears.

Cassette

After activating the cassette the software version of the cassette is displayed (see page 15).

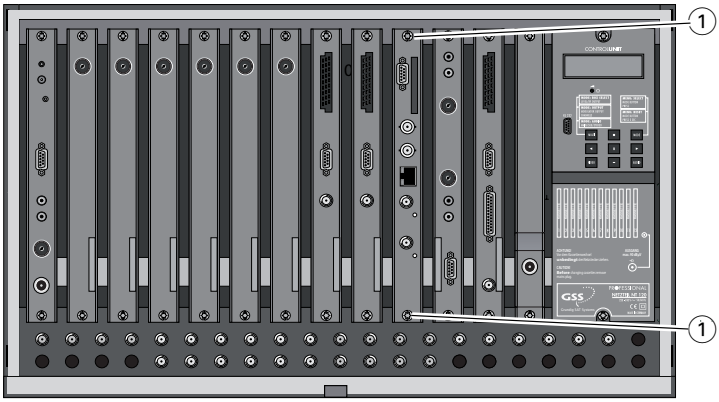
3 Assembly

3.1 Installing the cassette

⚠ – Ensure the head-end station is mounted so it will not be able to vibrate. Avoid, for example, mounting the head-end station onto a lift shaft or any other wall or floor construction that vibrates in a similar way.

– Before installing or changing a cassette unplug the power cable from the mains power socket.

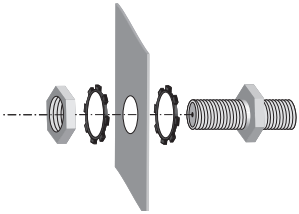
- Remove the fastening screws (1) of an unoccupied slot from the bracket of the head-end station.
- Insert the cassette in this slot and push it into the housing.
- Align the cassette and apply slight pressure to connect it to the connections of the board and the HF bus bar.
- Fasten the cassette with the screws (1).



3.2 EMC REGULATIONS

To comply with the current EMC regulations, it is necessary to connect the lines leading in and out of the head-end station using cable terminals.
When mounting the cassette in a head-end station which is installed in a 19" cabinet, make sure the connections leading in and out for the 19" cabinet are made using cable terminals.

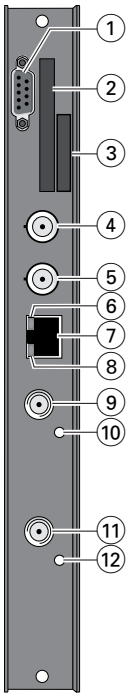
The attenuation of shielding of the connection lines for ASI and antenna must meet the requirements for "Class A".



- Insert the required number of cable terminals in the openings provided in the head-end station or in the 19" cabinet.

Tighten the nuts on the cable terminals until the teeth on the lock washer have penetrated the exterior coating and a good connection is made between the housing and cable terminals.

3.3 Cassette overview



(1) D-SUB socket "RS 232"
(2) Slot for a CA module
(3) Type label
(4) ASI output
(5) ASI input
(6) Status LED of the LAN interface (network connection)
(7) LAN socket
(8) Status LED of the LAN interface (data transfer)
(9) RF input of channel strip "**A**"
(10) Status LED of channel strip "**A**"
(11) RF input of channel strip "**B**"
(12) Status LED of channel strip "**B**"

The operating software of the cassette can be updated via the 9-pin D-SUB socket "RS 232" using a PC or notebook and the software "**BE-Flash**".
You can find the current operating software on the website "***www.gss.de/en***".

3.4 Connecting the cassette

- Connect the HF connections to the inputs (9) (channel strip "**Tuner A**") and (11) (channel strip "**Tuner B**").
- Connect the LAN socket (7).

—> In order to avoid restrictions of the network data rate (and therefore possible disturbances) we recommend to operate other applications like e.g. Internet, VOIP telephony etc. in separated networks.
—> **Exclusively use "Layer 3 switches", which support the IGMP protocol.**

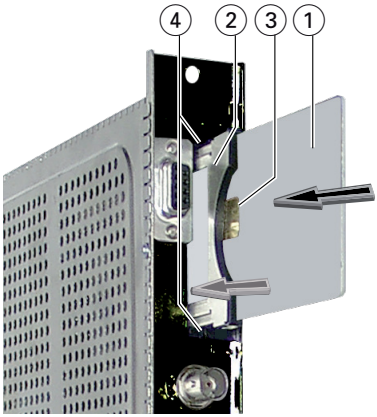
- Connect the ASI input (5) and the ASI output (4) to the peripheral ASI devices.

3.5 Retrofitting a CA module

The cassette is equipped with a common interface. It allows you to connect a CA module for various scrambling systems and service providers. Scrambled channels can only be descrambled with a CA module suitable for the scrambling system and the corresponding smart card. The smart card contains all the information for authorisation, descrambling and subscription.

– Check with the distributor or manufacturer of the CA module to be used to ensure that it is suitable for descrambling several services.
– **The hardware and software of this cassette have been thoroughly prepared and tested. Any changes made by service providers to the data structures in the service data might impair or even prevent this function.**
– When working with the CA module, please read the corresponding operating manual from the respective provider.

- Insert the smart card (1) into the CA module (2) so that the chip (3) on the smart card faces the thicker side (top) of the CA module.
- Insert the CA module into the guide rails of the CA slot (4) with the top side of the CA module facing the top side of the cassette.
- Push the CA module without canting into the guide rails of the CA slot (4) and contact it to the common interface.

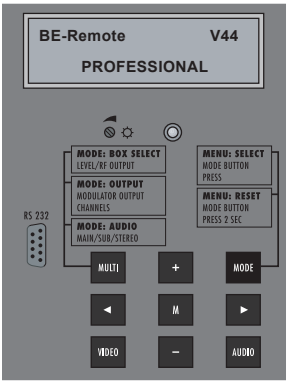


4 The control panel at a glance

4.1 Menu items

Programme the cassette using the buttons on the control unit of the head-end station. The two-line display of the control unit then shows the menus.
The parameters and functions to be set are underlined.
Use the **MODE** key to select the following main menu items:

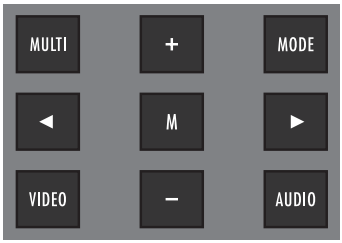
- Setting Ethernet parameters
- Input settings
  Kind of modulation
  Input channel / frequency
- Output settings
  Output IP settings
  Allocating the IP addresses
  Programme options
- Displaying the data rate
- Factory reset



4.2 Control panel

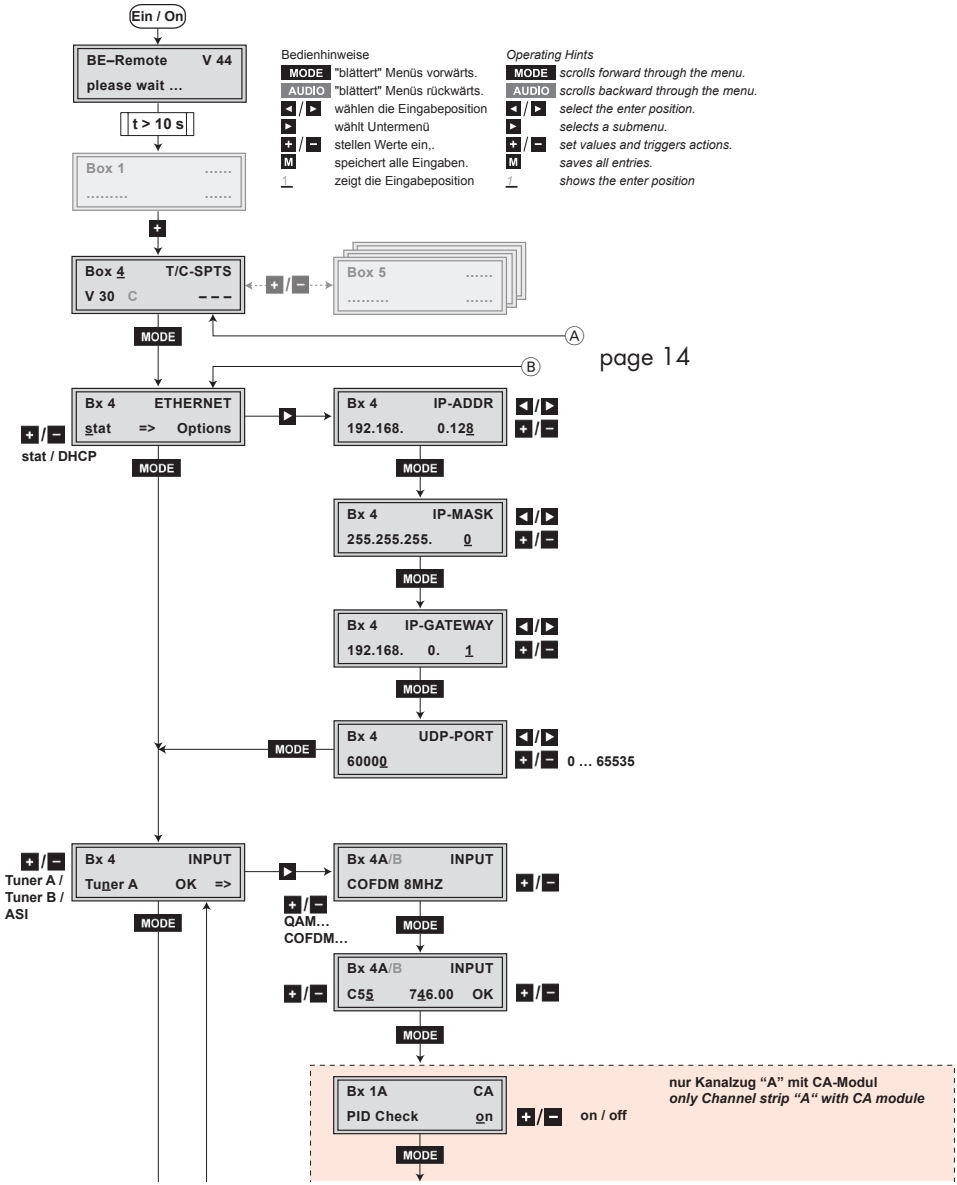
The key pad on the head-end station is used to scroll through the menus:

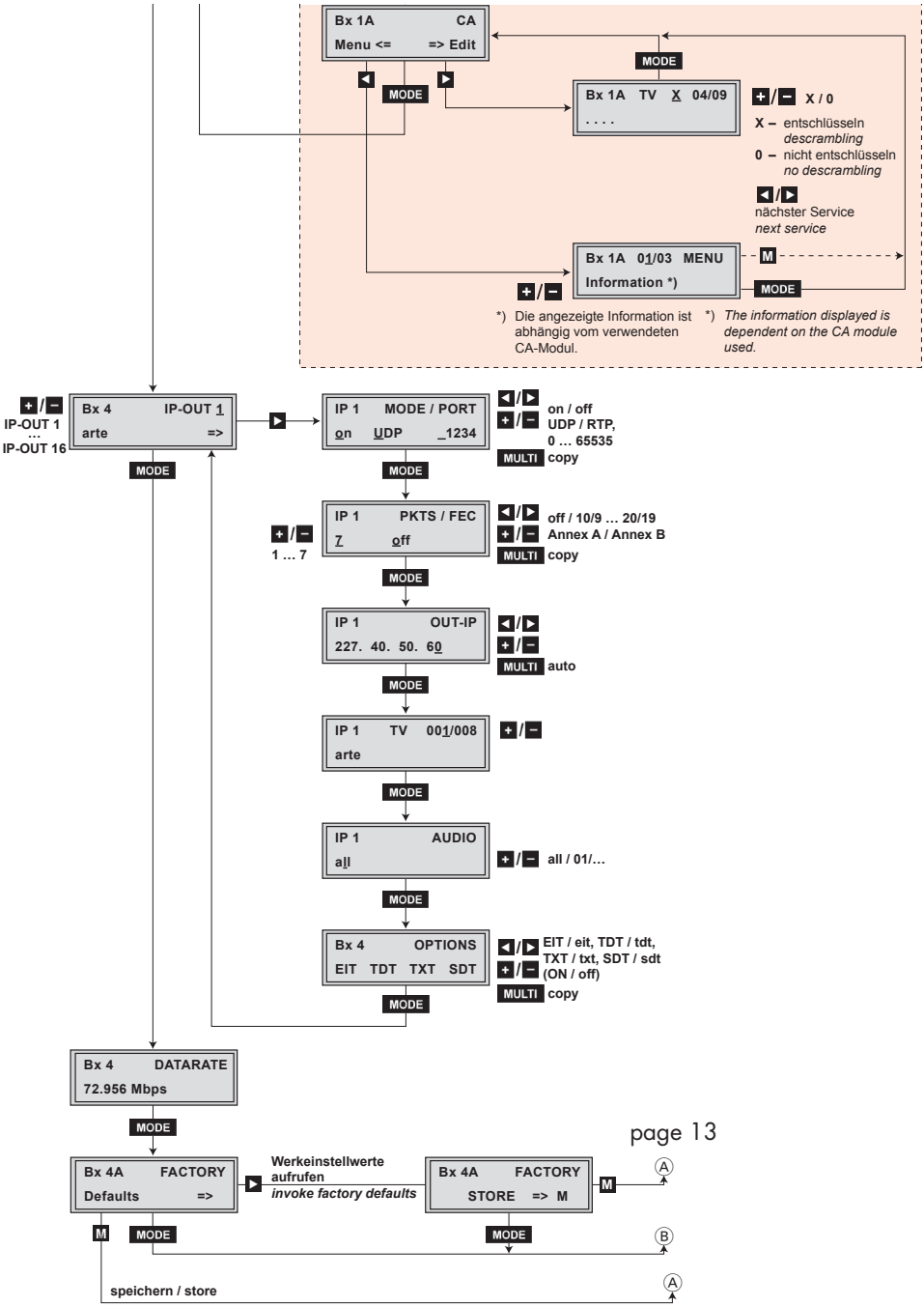
MODE scrolls forward through the menus.
◄ / **►** select parameters in the menus.
+ / **-** set values, initiate actions.
MULTI selects sub-menus.
AUDIO scrolls backward through the menus.
M saves all entries.



5 Programming

5.1 Programming procedure



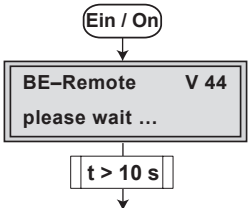

Bx 1A CA
Menu <= => Edit
MODE
Bx 1A TV X 04/09
. . . .
+/– X / 0
X – entschlüsseln
descrambling
0 – nicht entschlüsseln
no descrambling
◀/▶
nächster Service
next service
Bx 1A 01/03 MENU
Information *)
M
+/–
MODE
*) Die angezeigte Information ist abhängig vom verwendeten CA-Modul.
*) The information displayed is dependent on the CA module used.
+/–
IP-OUT 1
...
IP-OUT 16
Bx 4 IP-OUT 1
arte =>
IP 1 MODE / PORT
on UDP _1234
◀/▶
+/– on / off
UDP / RTP,
0 … 65535
MULTI copy
IP 1 PKTS / FEC
7 off
+/–
1 … 7
◀/▶
+/– off / 10/9 … 20/19
Annex A / Annex B
MULTI copy
IP 1 OUT-IP
227. 40. 50. 60
◀/▶
+/–
MULTI auto
IP 1 TV 001/008
arte
+/–
IP 1 AUDIO
all
+/– all / 01/…
Bx 4 OPTIONS
EIT TDT TXT SDT
◀/▶
+/– EIT / eit, TDT / tdt,
TXT / txt, SDT / sdt
(ON / off)
MULTI copy
Bx 4 DATARATE
72.956 Mbps
Bx 4A FACTORY
Defaults =>
Werkeinstellwerte
aufrufen
invoke factory defaults
Bx 4A FACTORY
STORE => M
M
A
B
speichern / store

page 13

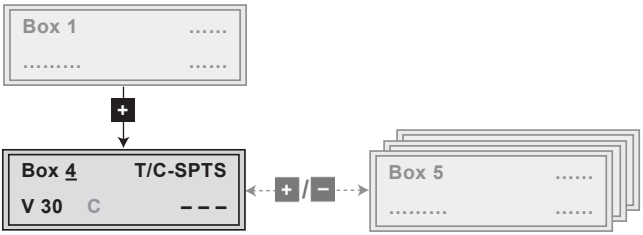
—> Pressing the **MODE** button for longer than 2 seconds cancels the programming procedure. This takes you back to the program item "Selecting the cassette" from any menu. Any entries that have not been saved are reset to the previous settings.
—> Entries in the menus can be saved by pressing the **M** key. You are taken back to the "Selecting the cassette" menu item.
—> Pressing the **AUDIO** button returns to the previous menus.

- Switch on the head-end station

—> The display shows the software version (e.g. V 44)
—> The processor reads the cassettes' data (approx. 10 seconds).



SELECTING THE CASSETTE



- Select the cassette you want to program (e.g. **Box 4**) by repeatedly pressing the button **+** / **-** if necessary.

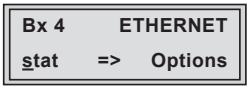
—> The display shows e.g. the menu "**Box 4 T/C-SPTS**":
"**Box 4**" stands for slot 4
"**T/C-SPTS**" type of cassette
"**V 30**" software version of the cassette

- Press the **MODE** button.

—> The "Ethernet parameters" – "**ETHERNET**" menu is activated.

ETHERNET PARAMETERS

In this menu you specify whether the Ethernet parameters for the cassette are entered automatically by a connected server ("**DHCP**"), or whether you want to enter them manually ("**stat**"). To assign the cassette uniquely, each IPTV cassette must be allocated its own IP address.



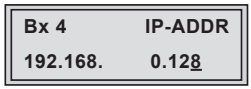
- Press the **+**/**-** buttons to select manual setting ("**stat**") or automatic setting ("**DHCP**") of the Ethernet parameters.
- Press the **►** button to activate the setting options ("**Options**").

—> The "IP address of the cassette" – menu "**IP-ADDR**" is activated.

IP ADDRESS OF THE CASSETTE

—> **Two IP address ranges are used:**
- **"Hardware" IP addresses, which are used to connect the cassettes in the network (e.g. 192.168.0.x).**
- **"IPTV" IP addresses (menu OUT-IP), which are used to send and receive the IPTV channels (e.g. 227.40.50.x). These IP addresses must be within the "multicast" range from 224.5.0.0 to 231.255.255.255.**

If you choose to enter the Ethernet parameters manually, set the IP address of the cassette in this menu. If "**DHCP**" is selected, the "**IP-ADDR**", "**IP-MASK**" and "**IP-GATEWAY**" sub-menus display the parameters that were assigned automatically by a connected server. If a server is not connected, " 0. 0. 0. 0*" appears in the corresponding menu. The star " * " in the display means that the data is provided by a DHCP server.



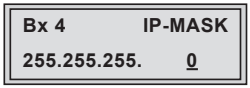
- Use the ◄/► buttons to place the cursor under the digit of the IP address displayed to be set and use + / - to set the IP address wished.

- Press the **MODE** button.

—> The "Address range" – "**IP-MASK**" menu is activated.

ADDRESS RANGE

In this menu you define the address range for the cassettes connected to the LAN network.



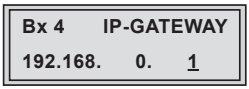
- Use the ◄/► buttons to place the cursor under the digit of the IP address displayed to be set and use + / - to set the IP address wished.

- Press the **MODE** button.

—> The "Address of the gateway" – "**IP-GATEWAY**" menu is activated.

ADDRESS OF THE GATEWAY

The address of a gateway (server) can be set in this menu. If no gateway is used you can skip this setting.



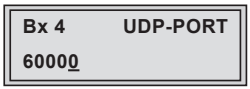
- Use the ◄/► buttons to place the cursor under the digit of the IP address displayed to be set and use + / - to set the IP address wished.

- Press the **MODE** button.

—> The "UDP port" – "**UDP-PORT**" menu is activated.

UDP PORT

The UDP port setting is required if the cassette needs to be reached externally to make the setting, such as from another input frequency. This setting is intended for future functions and can be skipped for this cassette.



- Use the ◄/► buttons to place the cursor under the digit of the port number displayed to be set and use + / - to set the port number wished ("**0**" … "**65535**").

- Press the **MODE** button.

—> The "Input data stream" – "**INPUT**" menu is activated.

INPUT PARAMETER

In this menu you select the signal source for which you would like to set the input parameters in the corresponding submenus.

- Press the + / - buttons to select the signal source of the input data stream ("**Tuner A**", "**Tuner B**", "ASI").

—> "**OK**" indicates that a transponder is received. If there is no input signal available "– –" is displayed instead of "**OK**".

—> No submenus are available for selection ASI. Herein you can only check whether an input signal is present or not.

- Press the ► button.

—> The "Kind of modulation / Symbol rate" – **INPUT**" submenu is activated.

Kind of modulation / Symbol rate

In this menu you have to set the corresponding input parameters for the transponder to be received.

Kind of modulation:

- Using the buttons **+**/**-** select the corresponding kind of modulation of the transponder (COFDM 7MHz, COFDM 8MHz, QAM16…QAM256).

Symbol rate:

If "QAM…" modulation is selected, the setting for the symbol rate appears at the right side.

- Use the **◄**/**►** buttons to position the cursor under the digit to be set for the symbol rate then use **+**/**-** to set the corresponding symbol rate.

- Press the **MODE** button.

—> The menu "Input channel / Input frequency" – "**INPUT**" is activated.

Input channel / Input frequency

In this menu you have to set the corresponding input channel / input frequency for the transponder to be received.

- Use the **◄**/**►** buttons to position the cursor under the digit to be set for the input channel / input frequency then use **+**/**-** to set the desired input channel / input frequency.

—> Once the RF receiver has synchronised to the input signal, "OK" is displayed.
—> If "– –" appears in the second line of the display, there is no input signal present. Check the configuration of the antenna system and the head-end station as well as the preceding settings of the cassette.

- Press the **MODE** button.

—> The "Input parameter" – "**INPUT**" menu is activated when the input signal source "**Tuner A**" without a CA module installed and "**Tuner B**" are programmed (page 18).
Programming the input signal source "**Tuner A**" with a CA module installed the "PID monitoring" – "**CA**" menu is activated (page 28).

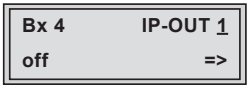
- Use the **+**/**-** buttons to select further input signal sources ("**Tuner B**") and programme them.

- Press the **MODE** button.

—> The "Output parameter" – "**IP-OUT 1**" main menu is activated.

OUTPUT PARAMETER

In this menu you select the output IP address for which you would like to set the output parameters in the corresponding submenus.



- Press the **+**/**-** buttons to select the IP outputs to be set ("**IP-OUT 1**" … "**IP-OUT 16**").

—> In the second line of the display the service is indicated allocated to the IP output (e.g. "**arte**").

- Press the **►** button.

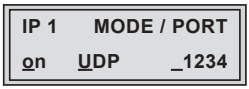
—> The "Switching the IP address off or on, Transmission protocol, Port number" – "**MODE / PORT**" submenu is activated.

Switching the IP address off or on

Transmission protocol

Port number

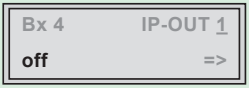
In this menu you can switch off the IP address displayed, and define the transmission protocol and the port number.



Switching the IP address off or on:

- Press the **+**/**-** buttons to switch off ("**off**") or ("**on**") the IP address and the service referred.

—> In the second line of the "**IP-OUT ...**" menu "**off**" is displayed instead of the service referred.



Selecting the transmission protocol:

- Press the **►** button to position the cursor under "**UPD**".
- Using the **+**/**-** buttons to select the transmission protocol wished:

"**UDP**"– The User Datagram Protocol is for the connectionless transmission of data to a certain application. The port number of the service is also sent which the data should obtain.

"**RTP**" – The Real-time Transport Protocol is for continuously transmitting multimedia data streams in an IP network. Unlike UDP, the header is transmitted which makes the data transmission more robust.

Setting the port number:

- Press the **►** button to position the cursor under the port number e.g. "**_1234**".
- Use the **◄**/**►** buttons to position the cursor under the digit of the port number displayed to be set.
- Using the **+**/**-** buttons set the port number wished.

Copying the settings to all IP addresses

- Pressing the **MULTI** button the settings "transmission protocol" and "Port number" can be copied to all IP addresses.

—> The display shows "**copy**" for a short time.

- Press the **MODE** button.

—> The "Quantity of data packets, Forward error correction, Transmission channel" – "**PKTS / FEC**" submenu is activated.

Quantity of data packets

Forward error correction

Transmission channel

In this menu you set the quantity of the data packets to be transmitted, the forward error correction FEC and the transmission channel. If the forward error correction is used the data to be transmitted is encoded in a redundant way so that the addressee can correct transmission errors.

IP 1	PKTS / FEC
7	off

Defining the quantity of data packets:

- Using the **+**/**-** buttons define the quantity of MPEG data packets in one IP data packet ("**1**" … "**7**").

Setting the forward error correction:

- Press the **►** button to position the cursor under "**off**" .

—> In position "**off**" the forward error correction (FEC) is switched off.

- Using the **+**/**-** buttons set the value of the FEC wished ("**off, 10/9**" … "**20/19**").

IP 1	PKTS / FEC
7	10/09 AnnexB

Setting the transmission channel:

- Press the ► button to position the cursor under "**Annex...**".
- Use the **+**/**-** buttons to set the transmission channel wished ("**AnnexA**" / "**AnnexB**").

Copying the settings to all IP addresses

- Pressing the **MULTI** button the settings "Quantity of the data packets", Forward error correction" and "Transmission channel" can be copied to all IP addresses.

—> The display shows "**copy**" for a short time.

- Press the **MODE** button.

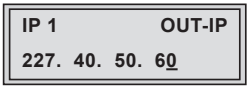
—> The "Output IP addresses" – "**OUT-IP**" submenu is activated.

OUTPUT IP ADDRESSES

In this menu you set the IP address for the IP output selected.

—> **"IPTV" IP addresses, which are used to send and receive the IPTV channels (e.g. 227.40.50.x) must be within the "multicast" range from 224.5.0.0 to 231.255.255.255.**

The software allows to allocate IP addresses to 16 services automatically in ascending order after setting the IP address.



If an already available IP address is occupied, an exclamation mark " **!** " appears in the first line of the display beside the number of the IP output.

Allocating IP addresses to services manually:

- Press the ◄/► buttons to position the cursor under the digit of the IP address to be set.
- Using the **+**/**-** buttons set the IP address wished.

Allocating IP addresses to services automatically:

- Pressing the **MULTI** button the first 16 of the present services are occupied with IP addresses in ascending order, starting from the IP address set.

—> The display shows "**auto**" for a short time.

- Press the **MODE** button.

—> The "Allocating services" submenu is activated.

ALLOCATING SERVICES

In this menu all services (programmes) supplied via "**Tuner A**", "**Tuner B**" and "**ASI**" can be displayed and each service is assigned a set IP address in the "**OUT-IP**" menu. The service can be accessed in the connected network using the given IP addresses for this output in the "**OUT-IP**" menu.

- Using the **+** / **-** buttons select the service wished.

—> The display shows e.g.: **IP 1 TV 001/008**
arte

Meaning of the indicators in the example:

"**IP 1**"	IP address with the consecutive number "1"
"**TV**"	Type of service "Television"
"**001/008**"	The 1st of 8 services is being allocated to the IP address.
"**arte**"	Name of the service

Further possible terms displayed:

"**RA**"	Type of the service "Radio" For radio stations, the background of the screen of the connected TV or test receiver is darkened.
" * "	The star means that the TV or radio station selected is scrambled. To enable the stations, the CA module and the appropriate smart card of the station provider are required.

—> If a service number (e.g. "**131**") appears instead of "**TV**" or "**RA**", this indicates that an unnamed station or an undefined data stream is being received.

⚠ If the service selected is already allocated to an IP address, in the first line of the display an exclamation mark " **!** " appears beside the type of the service.

If no service is found the display shows "**– – –**" instead of the name of the service. In this case check the configuration of the antenna system including the head-end station and the previous settings of the cassette as well as the components connected to the ASI input.

- Press the **MODE** button.

—> The "Sound options of the service" – "**AUDIO**" submenu is activated.

SOUND OPTIONS OF THE SERVICE

If several sound options in different languages, Dual sound ("**2ch**") or AC3 are transmitted in a service, you can select the desired audio stream from the transport stream in this menu.

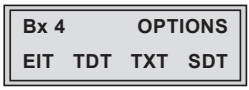
- Press **+** / **-** to select the desired sound option (e.g. "**all**", "**deu**" – German, "**2ch**" etc.).

- Press the **MODE** button.

—> The "DVB service information" – "**OPTIONS**" submenu is activated.

DVB SERVICE INFORMATION

In this menu the transmission of the DVB servic (EIT – Event Information Table, TDT – Time Date Table, TXT – Teletext, SDT – Service Description Table) can be activated or deactivated.



- Use the ◄/► buttons to position the cursor under the transmission option to be activated or deactivated.
- Using the + / - buttons activate ("**EIT**", "**TDT**", "**TXT**", "**SDT**") or deactivate ("**eit**", "**tdt**", "**txt**", "**sdt**") the transmission option wished.

—> Activated options are shown with capital letters, deactivated with small letters.

Copying the settings to all IP addresses

- Pressing the **MULTI** button the settings can be copied to all IP addresses.

—> The display shows "**copy**" for a short time.

- Press the **MODE** button.

—> The "Output parameter" – "**IP-OUT ...**" menu is activated (page 20).

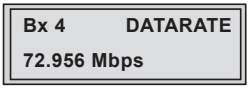
- Repeat the settings until all services wished are allocated to an IP address.

- Press the **MODE** button.

—> The "Output data rate" – "**DATARATE**" main menu is activated.

OUTPUT DATA RATE

In this menu the current data rate is displayed.

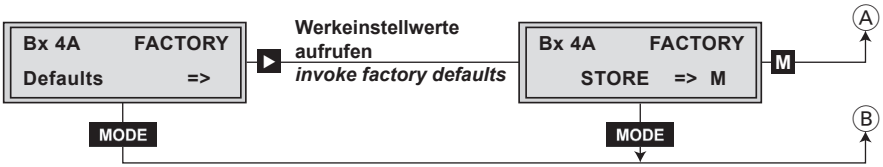


- Press the **MODE** button.

—> The "Factory reset" – "**FACTORY Defaults**" main menu is activated.

FACTORY RESET

In this menu you can reset all settings to the factory defaults.



- Press the ▶ button.

—> The factory defaults are invoked ("**FACTORY STORE**").
—> By pressing the **MODE** button, you will be returned to the menu item "Ethernet parameters" **without** invoking the factory defaults (page 16).

- Press the **M** button.

—> The factory defaults are saved. The display shows "STORE"
—> Back to "Selecting the cassette" (page 15).
—> By pressing the **MODE** button, you will be returned to the menu item "Ethernet parameters" **without** saving the factory defaults (page 16).

Saving settings

- Press the **M** button.

—> Back to "Selecting the cassette" (page 15).
—> The settings are saved.

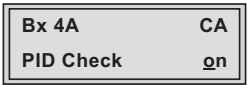
Operation with a CA module

In order for this function of the CA module to be possible, in the "Input parameter" – "**INPUT**" menu (page 18) an input signal source must be selected whose data stream contains services which can be descrambled by the CA module you are using and your smart card. Where both scrambled stations and unscrambled regional services are transmitted, short-term picture loss may occur when switching between scrambled and unscrambled services.

—> The "PID monitoring" – "**CA**" submenu is displayed during the input parameter setting, if a CA module is inserted.

PID monitoring

The factory default of the PID monitoring is switched on.
If particular PIDs are not descrambled the CI module is reset. Additionally dropouts may occur if several services are descrambled. To prevent this the PID monitoring can be switched off.



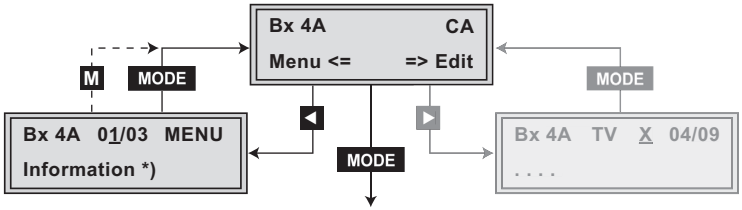
- Use the **+**/**-** buttons to switch "**off**" or "**on**" the PID monitoring.

- Press the **MODE** button.

—> The "Configuring the CA module" – "**CA**" submenu is activated.

Configuring the CA module

The menu varies according to which CA module you are using. For this reason, please refer to the operating manual of your particular CA module. The relevant information is shown in the display of the head-end station. This may appear as a fixed display or as scrolling text according to display capabilities.



—> By pressing the **MODE** button you can skip the "Configuring the CA module" – "**CA**" menu and activate the "Input parameter" – "**INPUT**" menu (page 18).

- Press the ◄ button to activate the menu of the CA module.

—> The display shows e.g.: **Bx 4A 01/03 MENU**
Information

Meaning of the indicators:

"**Bx 4A**"	Slot 4, channel strip "**Tuner A**"
"**01/03**"	The first of three menu items is activated.
"**MENU**"	The menu of the CA module is activated.

For the explanation of further details please use the operating instructions of the CA module used.

- Use the + / - buttons to activate the menu desired.
- Press the ► button to activate the menu.
- Use the + / - buttons to select the function desired.
- To set the CA module use the ◄ / ► and + / - buttons.
- All settings are saved by pressing the **M** button.

—> You will be returned to the "Configuring the CA module" – "**CA**" submenu item.

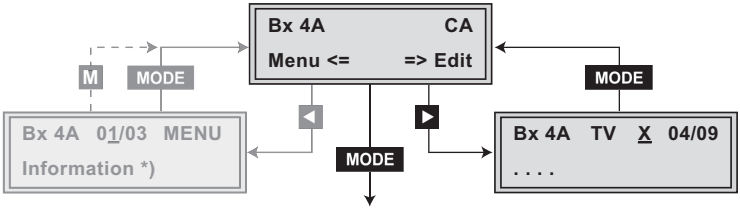
—> By pressing the **MODE** button you can cancel the settings in the menu of the CA module and are returned to the "Configuring the CA module" – "**CA**" menu.

- Press the ▶ button.

—> The "Descrambling services" – "**Edit**" submenu is activated.

DESCRAMBLING SERVICES

In this menu you select the services wished from the scrambled data stream, which are to be descrambled.



—> The display shows e.g.: **Bx 4A TV X 04/09**
. . . .

Meaning of the indicators in the example:

"**Bx 4A**"	Slot 4, channel strip "**Tuner A**"
"**TV**"	"Television" (type of service)
"**X**"	The currently selected service will be descrambled.
"**04/09**"	The 4th of 9 services read is being displayed.
"**. . . .**"	Name of the service

Further possible terms displayed:

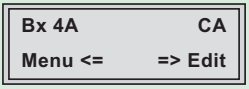
"**RA**"	"Radio" (type of service)
"**0**"	The currently selected service remains unchanged.

- Use the ◀/▶ buttons to call up the services in sequential order which are to be decoded, then use + / - to decrypt ("**X**") or not to decrypt them ("**0**").

Save changes and activate the filter:

- Press the **MODE** button.

—> The filter is activated. The display shows the "Configuring the CA module" – "**CA**" menu.



- Press the **MODE** button.

—> The "Input data stream" – "**INPUT**" menu is activated (page 19).

After installing the head-end station, upgrading accessories or installing cassettes it is necessary to tighten all cable connections, cable terminals and cover screws in order to maintain compliance with current EMC regulations securely.

- Securely tighten the cable bolted connections using an appropriate open-ended spanner.
- Mount the front cover (see assembly instructions of the head-end station).

Declaration of CE conformity

GSS	**Konformitätserklärung** **Declaration of Conformity / Déclaration de Conformité** **003/ 13**	CE

Der Hersteller/Importeur The manufacturer/importer Le producteur/importateur	**GSS GRUNDIG SAT-Systems GmbH**
Anschrift / Address / Adresse	**Beuthener Straße 43, D-90471 Nürnberg, Germany**

erklärt hiermit eigenverantwortlich, daß das Produkt:
declare under their sole responsibility that the product: / déclare, que le produit:

Bezeichnung / Name / Description	**Head-End HDTV Converter to IP** **DVB-C / T → SPTS**
Type / Model / Type	**GSS PCIS 1000**
Bestell-Nr. / Order-No. / N° de réf.	**GAP 5200**

folgenden Normen entspricht:
is in accordance with the following specifications: / correspond aux normes suivantes:

EN 50083-2:	***2006***
EN 60065 :	***2002***
EN 60065 + A1:	***2006***
EN 60065 + A11	***2008***

Das Produkt erfüllt somit die Forderungen folgender EG-Richtlinien:
Therefore the product fulfils the demands of the following EC-Directives:
Le produit satisfait ainsi aux conditions des directives suivantes de la CE:

2006/95/EG	**Richtlinie betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen** **Directive relating to electrical equipment designed for use within certain voltage limits** **Directive relatives au matériel électrique destiné à être employé dans certaines limites de tension**
2004/108/EG	**Richtlinie über die elektromagnetische Verträglichkeit** **Directive relating to electromagnetic compatibility** **Directive relatives à la compatibilité électromagnétique**

Nürnberg, 29. Januar 2013

Michael Bierschneider
Leiter Entwicklung
Manager Development / Directeur Développement

Service:

Phone: +49 (0) 911 / 703 2221 • Fax: +49 (0) 911 / 703 2326 • Email: service@gss.de
Grundig SAT Systems GmbH • Beuthener Straße 43 • D-90471 Nürnberg • Germany

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